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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,787	12/06/2000	Yuval Harari	00/21265	8216

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EXAMINER

LEE, RICHARD J

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 12/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/729,787

Applicant(s)

Harari et al

Examiner

Richard Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Oct 22, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-50 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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1. The applicants' arguments from the amendment filed October 22, 2002 have been noted and considered, but are deemed moot in view of the following new grounds of rejections.
2. The drawings are objected to for the same reasons as set forth in paragraph (1) of the last Office Action (see Paper no. 2). Though the applicants have indicated at page 12 of the amendment filed October 22, 2002 that Figures 1-5 have been amended, the file however does not contain any drawings as proposed. It is apparent that the proposed drawings have been detached from the file and thus are missing. Please resubmit the proposed drawings for approval. The Examiner apologizes for any inconvenience that this may have caused for the applicants.
3. Claims 42, and 46-50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For examples:

- (1) claim 42, line 7, after "method", ",", should be inserted for clarity;
- (2) claim 42, line 7, "said first and second data acquisition modes" shows no clear antecedent basis;
- (3) claim 46, lines 2-3, "said object imaged" shows no clear antecedent basis;
- (4) claim 46, line 13, "said object imaged" shows no clear antecedent basis; and
- (5) claim 48, line 13, "said object" shows no clear antecedent basis.

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8, 11-13, 15-21, 23-31, 34, 35, 38-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacus et al of record (6,101,265) in view of Kley (4,806,776)..

Bacus et al discloses a method and apparatus for acquiring and reconstructing magnified specimen images from a computer controlled microscope as shown in Figures 1-11, and substantially the same data acquisition and display system, image data storage device, acquisition and display coordinator and method, method of display of data acquired in at least two data acquisition methods from a scannable field of interest, method of constructing an image gathering and display coordination system, control system for controlling an image data acquisition device, a control system for controlling an imaging device and a display device, a method of applying an intrinsic coordinate system to a mount and object system, and a method of imaging a mount and object system using an intrinsic coordinate system as claimed in claims 1-8, 11-13, 15-21, 23-31, 34, 35, and 38-49, comprising substantially the same at least one data acquisition device (i.e., 16 of Figure 5), operable to acquire field image data of a presently viewed field having field location data (see column 3, line 17 to column 4, line 29, column 4, line 65 to column 5, line 19, column 7, line 16-48, column 11, lines 14-42, column 11, line 62 to column 12, line 5), from a scannable

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field of interest using each of at least a first and a second data acquisition method (see 24, 26, 28 of Figures 1-3, and column 7, lines 16-48), the data acquisition device is operable to acquire image data of a presently viewed field using a second data acquisition method and the field data display device is operable to display the image data in real time in conjunction with a corresponding image acquired using the first data acquisition method (see 24, 26, 28 of Figures 1-3, and column 7, lines 16-48), the data acquisition device is a microscope (i.e., 16 of Figure 5) being one of a group comprising a light microscope, a scanning electron microscope, and a transmission electron microscope, and the data acquisition device is terrestrially based (see Figure 5), the data acquisition device is any one of a group comprising a thermal imager, an image intensified, a telescope, a camera and a radar (see camera 14 of Figure 5); a field data storage device (column 8, lines 26-36, column 9, lines 36-58) for storing the field data together with field location data corresponding thereto, the field data storage device is operable to store image data of an entirety of the scannable field of interest acquired according to the first data acquisition method, the storage device storing image data of a plurality of parts of a scannable field of interest together with location data of the part within the scannable field of interest; field data display device (see Figures 1-3) being operable to display simultaneously field data of the presently viewed field, acquired respectively by the first and second data acquisition method, the field data being matchable by the field location data (see column 7, lines 16-48, column 8, lines 27-67); wherein the scannable field of interest is substantially larger than the presently viewed field such that a plurality of viewed fields are required to cover the scannable field of interest (see 24, 26 of

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Figures 1-3, column 7, lines 16-48, column 8, lines 27-67); the acquisition and display coordinator for coordinating between at least one image data acquisition device, the coordinator operable to position the data acquisition device, monitor positioning of the data acquisition device (see Figures 4 and 5), wherein the location data additionally comprises focussing data for defining a focal plane (see Abstract, column 2, lines 28-47); software on computer readable media for installation on a computer operatively associated with the data acquisition device (see Figures 4 and 5); forming a plurality of first images of the field of interest, indexing the images, storing the indexed images, scanning the field of interest using a second data acquisition method to form at least one second image corresponding to the one of the first images, determining from the indices which of the first images corresponds to the second image, and simultaneously displaying the second image and the corresponding first image (see column 3, line 17 to column 4, line 29, column 4, line 65 to column 5, line 19, column 7, line 16-48, column 11, lines 14-42, column 11, line 62 to column 12, line 5); providing an image gathering device operable to gather image data, using a plurality of image gathering methods, according to externally provided positioning commands, providing an image storing device and connecting the image storing device to the image gathering device such that the image storing device is able to store data gathered from the image gathering device in association with the externally provided positioning commands corresponding to the data, and providing an image display device for simultaneously displaying a plurality of images gathered using different image gathering methods but with identical positioning commands (see Figures 1-5, column 7, lines 16-48, columns 8-9); the control system for

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permitting a user to move over a field of interest with the imaging device to image the field in parts using one imaging method, and to display a current part of the display device whilst simultaneously and automatically displaying a second image of a same part of the field previously obtained using a different imaging method, the second image being automatically replaced as the imaging device moves to a different part of the field of interest (see Figures 1-5 and columns 7-9); the imaging device is operable to image the field of interest using at least three imaging methods and wherein the display device is operable to display simultaneously all images of a part of the field of interest currently being viewed (see 24, 26, 28 of Figures 1-3); and identifying a plurality of edge points in the mount and object system using automatic image processing, interpolating straight lines between the edge points, identifying two perpendicular straight lines from the interpolated straight lines, identifying a meeting point between the perpendicular straight lines, defining the meeting point as an origin for the intrinsic coordinate system, using the coordinate system to provide automatic cross-referencing between the points on the object imaged, the mount an object system has a substantially rectangular outline, making a plurality of images at different locations on the mount and object system, and indexing the images based on its respective location expressed in terms of the intrinsic coordinate system (i.e., editing and positioning the XY step size, see rectangular boundary within point 290 of Figure 11, see column 3, line 43 to column 4, line 16, column 9, line 36 to column 10, line 59, column 11, line 14 to column 12, line 5).

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Bacus et al does not particularly disclose, though, the followings:

(a) wherein the first and second data acquisition methods being respectively different illumination, marking and data gathering combinations, providing co-ordinated viewing of points of the object imaged using different image gathering methods, using the co-ordinate system to provide automatic cross-referencing between the points on the object imaged using the different image gathering methods, and providing correspondence between regions on the object when imaged by different imaging methods as claimed in claims 1, 15, 30, 38, 39, 40, 42, 43, 45, 46, and 48; and

(b) wherein the data acquisition device is suitable for being airborne and spaceborn as claimed in claims 12, 13, 24, and 25.

Regarding (a), Kley discloses an electrical illumination and detecting apparatus as shown in Figures 1, 81, 91, 93, 100-112, and teaches the conventional use of different illuminations, markings, and data gathering combinations for the imaging and detecting systems (see Figures 1, 81, 91, 93, and 100-112, column 36, lines 20-63, column 38, lines 13-37, column 39, line 56 to column 40, line 6, column 40, lines 15-28, column 42, line 57 to column 43, line 2). Therefore, it would have been obvious to one of ordinary skill in the art, having the Bacus et al and Kley references in front of him/her and the general knowledge of illumination and data gathering techniques in an image data acquisition system, would have had no difficulty in providing the different illumination, marking and data gathering combination systems as taught by Kley as the specific means for picking up the first and second images of Bacus et al for further displaying of

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the images as acquired for the same well known image acquisition and display purposes as claimed.

Regarding (b), the Examiner takes Official Notice that the data acquisition device of Bacus et al may be provided airborne and spaceborn so as to provide substantially the same if not the same services in a different environment as desired. Therefore, it would have been obvious to one of ordinary skill in the art, having the Bacus et al reference in front of him/her and the general knowledge of the use of devices in different environments, would have had no difficulty in providing the data acquisition device of Bacus et al in the airborne and spaceborn environments for the same well known purposes as claimed.

6. Claims 9, 10, 22, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bacus et al and Kley as applied to claims 1-8, 11-13, 15-21, 23-31, 34, 35, and 38-49 in the above paragraph (5), and further in view of Trulson et al of record (6,025,601).

The combination of Bacus et al and Kley discloses substantially the same data acquisition and display system, image data storage device, acquisition and display coordinator and method, method of display of data acquired in at least two data acquisition methods from a scannable field of interest, method of constructing an image gathering and display coordination system, control system for controlling an image data acquisition device, a control system for controlling an imaging device and a display device, a method of applying an intrinsic coordinate system to a mount and object system, and a method of imaging a mount and object system using an intrinsic

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coordinate system as above, but does not particularly disclose wherein the data acquisition device is a telescope, wherein the telescope is any one of a group comprising a refracting telescope, a reflecting telescope, an infra-red telescope, a radio telescope, a gamma-ray telescope, and an x-ray telescope, wherein the at least one of the first and second data is acquired using a member of a group comprising a telescope and a thermal imaging device, the member being operable to gather data at a plurality of different wavelengths and wherein each data acquisition method comprises gathering data at a different one of the wavelengths as claimed in claims 9, 10, 22, 36, and 37. However, Trulson et al discloses a method and apparatus for imaging a sample on a device as shown in Figure 3, and teaches the conventional use of providing a telescope system with a microscope objective for expanding the excitation light to the desired diameter (see column 3, lines 14-26, column 29, lines 23-32). Therefore, it would have been obvious to one of ordinary skill in the art, having the Bacus et al, Kley, and Trulson et al references in front of him/her and the general knowledge of imaging techniques, would have had no difficulty in providing the telescope of Trulson et al as the data acquisition device of Bacus et al for the same well known imaging purposes as claimed.

7. Claims 32 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bacus et al and Kley as applied to claims 1-8, 11-13, 15-21, 23-31, 34, 35, and 38-49 in the above paragraph (5), and further in view of Spigarelli et al of record (5,627,913).

The combination of Bacus et al and Kley discloses substantially the same data acquisition and display system, image data storage device, acquisition and display coordinator and method,

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method of display of data acquired in at least two data acquisition methods from a scannable field of interest, method of constructing an image gathering and display coordination system, control system for controlling an image data acquisition device, a control system for controlling an imaging device and a display device, a method of applying an intrinsic coordinate system to a mount and object system, and a method of imaging a mount and object system using an intrinsic coordinate system as above, but does not particularly disclose the followings:

(a) wherein the first and second images, being simultaneously displayed, are superimposed one on the other as claimed in claim 32; and

(b) identifying an identical feature on each series of images, placing a cross hair on the identical feature on each series of the images, and defining the center of the cross hair as being the same location on each set of images so as to modify the intrinsic coordinate system as claimed in claim 50.

Regarding (a) and (b), Spigarelli et al discloses a placement system using a split imaging system coaxially coupled to a component pickup means as shown in Figures 4 and 7, and teaches the conventional superimposing of images for simultaneous display (see column 4, lines 21-44, column 11, lines 4-10, lines 39-50, column 12, lines 10-51) as well as the use of cross hairs for identifying position locations (see column 22, line 66 to column 23, line 7). Therefore, it would have been obvious to one of ordinary skill in the art, having the Bacus et al, Kley, and Spigarelli et al references in front of him/her and the general knowledge of imaging location identification and image superimposing techniques, would have had no difficulty in providing the simultaneous

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display of superimposed images and cross hair applications as taught by Spigarelli et al for the imaging system of Bacus for the same well known imaging identification and superimposing of images purposes as claimed.

8. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bacus et al and Kley as applied to claims 1-8, 11-13, 15-21, 23-31, 34, 35, and 38-49 in the above paragraph (5), and further in view of Hellmuth et al of record (5,795,295).

The combination of Bacus et al and Kley discloses substantially the same data acquisition and display system, image data storage device, acquisition and display coordinator and method, method of display of data acquired in at least two data acquisition methods from a scannable field of interest, method of constructing an image gathering and display coordination system, control system for controlling an image data acquisition device, a control system for controlling an imaging device and a display device, a method of applying an intrinsic coordinate system to a mount and object system, and a method of imaging a mount and object system using an intrinsic coordinate system as above, but does not particularly disclose wherein the simultaneously displayed images are displayed side by side. Side by side displaying of simultaneous displayed images are however old and well recognized in the art, as exemplified by Hellmuth et al (see column 8, lines 13-28). Therefore, it would have been obvious to one of ordinary skill in the art, having the Bacus et al, Kley, and Hellmuth et al references in front of him/her and the general knowledge of image displaying techniques, would have had no difficulty in providing the

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simultaneous display of images side by side as taught by Hellmuth et al for the imaging system of Bacus for the same well known imaging purposes as claimed.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. **Any response to this final action should be mailed to:**

Box AF

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or faxed to:

(703) 872-9314, (for formal communications; please mark "EXPEDITED
PROCEDURE") (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA., Sixth Floor (Receptionist).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (703) 308-6612. The Examiner can normally be reached on Monday to Friday from 8:00 a.m. to 5:30 p.m, with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group customer service whose telephone number is (703) 306-0377.


RICHARD LEE
PRIMARY EXAMINER

Richard Lee/rl

12/19/02